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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
WONG, ALLEN C	

ART UNIT	PAPER NUMBER
2621	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/730,405	ILER, JOHN	
	Examiner	Art Unit	
	Allen Wong	2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 August 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *08 December 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1 and 7 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshimura (7,061,936) in view of Hata (6,404,932).

Regarding claim 1, Yoshimura discloses a method of processing a stream of data, comprising:

receiving a stream of data, the stream of data including a plurality of encoded symbols (fig.1, element 3b receives a stream of data, that is encoded, wherein the stream of data is to be viewed at element 2);

contemporaneously processing a first subset of the encoded symbols to identify a second subset of the encoded symbols, where each encoded symbol in the second subset uses a common coding context (fig.3, the data from a stream of video data is received, wherein the stream of video data comprises a plurality of group of frames (GOPs), a group of frames comprises a plurality of individual frames, ie. I, P and B frames, where the frames (I; P and B) are encoded with subsets of encoded symbols,

wherein fig.3 and 10, the use of binary code is the common context used to process the encoded symbols);

evaluating at least one symbol from the second subset of encoded symbols to determine the common coding context for the second subset (fig.3, note the a1, b1 are the "IMPORTANT PACKET" data, and the "OTHER PACKET EXCLUDING IMPORTANT PACKET" data, in that fig.3 and 10, the use of binary code is the common context used to process the encoded symbols); and

using the common coding context to process the second subset of encoded symbols (fig.3 and 10, the use of binary code is the common context used to process the encoded symbols).

Yoshimura does not specifically disclose wherein the coding context is indicates a probability of possible symbols. However, Hata teaches the coding context is indicates the probability of possible symbols (col.14, ln.55-62, Hata discloses the use of a symbol generation probability model for generating the probability of possible symbols for representing the elements of the coded image data, col.15, ln.7-15, Hata discloses that the better the symbol matches the generation probability model of the symbol, less code bits are necessary to encode the symbol string). Therefore, it would have been obvious to one of ordinary skill in the art to combine Hata's teachings into Yoshimura's invention for efficiently encoding video data so as to permit efficient decoding and displaying of image data at the output (Hata's col.15, ln.8-12).

Regarding claim 2, Yoshimura discloses wherein processing the second subset of encoded symbols comprises decoding the stream of data (fig.3, note at 3b, the data is decoded).

Regarding claim 3, Yoshimura discloses the data stream includes encoded video data (fig.3, note video frames A, B and C are encoded, in that the data from a stream of video data is received, wherein the stream of video data comprises a plurality of frames, a group of frames comprises a plurality of frames, where the frames are encoded with subsets of encoded symbols).

Regarding claim 4, Yoshimura discloses the encoded symbols represent elements of the encoded video data (fig.3, note video frames A, B and C are encoded, in that the data from a stream of video data is received, wherein the stream of video data comprises a plurality of frames, a group of frames comprises a plurality of frames, where the frames are encoded with subsets of encoded symbols).

Regarding claims 5-6, Yoshimura H.264 and MPEG-4 part 10 standard encoding scheme (col.11, ln.37, MPEG-4 is also known as H.264).

Regarding claim 7, Yoshimura discloses a method of processing a stream of data, comprising:

receiving a stream of data, the stream of data comprising a plurality of symbols to be processed (fig.1, element 3b receives a stream of data, that is encoded, wherein the stream of data is to be viewed at element 2);

contemporaneously processing a first subset of the symbols to identify a second subset of the symbols, where each symbol in the second subset uses a common

coding context (fig.3, the data from a stream of video data is received, wherein the stream of video data comprises a plurality of group of frames (GOPs), a group of frames comprises a plurality of individual frames, ie. I, P and B frames, where the frames (I, P and B) are encoded with subsets of encoded symbols, wherein fig.3 and 10, the use of binary code is the common context used to process the encoded symbols);

evaluating at least one symbol from the second subset of symbols to determine the common coding context (fig.3, note the a1, b1 are the "IMPORTANT PACKET" data, and the "OTHER PACKET EXCLUDING IMPORTANT PACKET" data, in that fig.3 and 10, the use of binary code is the common context used to process the encoded symbols); and

using the common coding context to process the second subset of symbols (fig.3 and 10, the use of binary code is the common context used to process the encoded symbols).

Yoshimura does not specifically disclose wherein the coding context is indicates a probability of possible symbols. However, Hata teaches the coding context is indicates the probability of possible symbols (col.14, ln.55-62, Hata discloses the use of a symbol generation probability model for generating the probability of possible symbols for representing the elements of the coded image data, col.15, ln.7-15, Hata discloses that the better the symbol matches the generation probability model of the symbol, less code bits are necessary to encode the symbol string). Therefore, it would have been obvious to one of ordinary skill in the art to combine Hata's teachings into

Yoshimura's invention for efficiently encoding video data so as to permit efficient decoding and displaying of image data at the output (Hata's col.15, ln.8-12).

Regarding claim 8, Yoshimura discloses wherein the processing of the second subset of symbols includes encoding the stream of data (fig.3, note at 3a, the data is encoded).

Regarding claim 9, Yoshimura discloses the data stream includes encoded video data (fig.3, note video frames A, B and C are encoded, in that the data from a stream of video data is received, wherein the stream of video data comprises a plurality of frames, a group of frames comprises a plurality of frames, where the frames are encoded with subsets of encoded symbols).

Regarding claim 10, Yoshimura discloses the encoded symbols represent elements of the encoded video data (fig.3, note video frames A, B and C are encoded, in that the data from a stream of video data is received, wherein the stream of video data comprises a plurality of frames, a group of frames comprises a plurality of frames, where the frames are encoded with subsets of encoded symbols).

Regarding claims 11-12, Yoshimura discloses H.264 and MPEG-4 part 10 standard encoding scheme (col.11, ln.37, MPEG-4 is also known as H.264).

Regarding claim 13, Yoshimura does not specifically disclose the coding context indicates a most probable symbol. However, Hata teaches the coding context indicates a most probable symbol (figs.23-26 and col.19, ln.47 to col.20, ln.24, Hata discloses the assignment of an index value according to the state of each pixel, wherein for instance, index 0 has a 0.9 or 90% chance to be assigned under symbol 0

and 0.1 or 10% chance to be assigned under symbol 1, thus, for index 0, symbol 0 is the most probable symbol). Therefore, it would have been obvious to one of ordinary skill in the art to combine Hata's teachings into Yoshimura's invention for efficiently encoding video data so as to permit efficient decoding and displaying of image data at the output (Hata's col.15, ln.8-12).

Regarding claim 14, Yoshimura does not specifically disclose the coding context indicates a less probable symbol. However, Hata teaches the coding context indicates a less probable symbol (figs.23-26 and col.19, ln.47 to col.20, ln.24, Hata discloses the assignment of an index value according to the state of each pixel, wherein for example, index 0 has a 0.9 or 90% chance to be assigned under symbol 0 and 0.1 or 10% chance to be assigned under symbol 1, thus, for index 0, symbol 1 is the less probable symbol). Therefore, it would have been obvious to one of ordinary skill in the art to combine Hata's teachings into Yoshimura's invention for efficiently encoding video data so as to permit efficient decoding and displaying of image data at the output (Hata's col.15, ln.8-12).

Regarding claim 15, Yoshimura does not specifically disclose the coding context indicates a most probable symbol. However, Hata teaches the coding context indicates a most probable symbol (figs.23-26 and col.19, ln.47 to col.20, ln.24, Hata discloses the assignment of an index value according to the state of each pixel, wherein for instance, index 0 has a 0.9 or 90% chance to be assigned under symbol 0 and 0.1 or 10% chance to be assigned under symbol 1, thus, for index 0, symbol 0 is the most probable symbol). Therefore, it would have been obvious to one of ordinary

skill in the art to combine Hata's teachings into Yoshimura's invention for efficiently encoding video data so as to permit efficient decoding and displaying of image data at the output (Hata's col.15, ln.8-12).

Regarding claim 16, Yoshimura does not specifically disclose the coding context indicates a less probable symbol. However, Hata teaches the coding context indicates a less probable symbol (figs.23-26 and col.19, ln.47 to col.20, ln.24, Hata discloses the assignment of an index value according to the state of each pixel, wherein for example, index 0 has a 0.9 or 90% chance to be assigned under symbol 0 and 0.1 or 10% chance to be assigned under symbol 1, thus, for index 0, symbol 1 is the less probable symbol). Therefore, it would have been obvious to one of ordinary skill in the art to combine Hata's teachings into Yoshimura's invention for efficiently encoding video data so as to permit efficient decoding and displaying of image data at the output (Hata's col.15, ln.8-12).

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allen Wong whose telephone number is (571) 272-7341. The examiner can normally be reached on Mondays to Thursdays from 8am-6pm Flextime.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John W. Miller can be reached on (571) 272-7353. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Allen Wong
Primary Examiner
Art Unit 2621

AW
10/24/07